Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grading Mod: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Mrs. G Mr. H Mr. S

Cutting – Edge Biology

DNA Bar Codes (pg. 504)

*Biology*; Glencoe McGraw-Hill; 2007 edition

**Background Knowledge:**

Define: diagnostic tool, UPC bar codes, bioinformatics, mitochondrial DNA, taxonomist, evolution

Question: “Can you think of a way that UPC codes could be used in biology?”

**The Article**: As you read the article, complete the organizer below.

HOW DOES IT WORK?

FIELDS OF SCIENCE INVOLVED

WHAT IS IT?

POTENTIAL BENEFITS

**Follow-Up:** Answer the questions below. When answering these questions, you NEED to draw upon previous units’ materials as well as the article. Reference the paragraph from the article that you used to help answer the questions.

1. How might this breakthrough advance the field of evolution?
2. Will scientific naming become a thing of the past? Why or why not?
3. Looking at the DNA sequence picture, why is the robin more closely related to the hermit thrush rather than the bumble bee?

**Think & Find:** what question to do you have about DNA bar coding? Come up with a question of your own. Then, go find the answer to your question as well as the question below. Cite your references. Remember, databases are better than Google searches!

Your Question:

Why couldn’t scientists use the COI gene for plants?